CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 92-137

RESCINDING SITE CLEANUP REQUIREMENTS NOs. 89-160 AND 91-123
REVISION OF SITE CLEANUP REQUIREMENTS FOR:

TECHNICAL COATINGS COMPANY AND
BENJAMIN MOORE & COMPANY

FOR THE PROPERTY LOCATED AT:

1000 WALSH AVENUE
SANTA CLARA, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. This site is regulated by Site Cleanup Requirements under Board Order No. 89-160 (adopted September 20, 1989) as amended by Board Order No. 91-123 (adopted August 21, 1991). The Board also adopted Waste Discharge Requirements (NPDES) for this site on March 20, 1991.

2. Technical Coatings Company has owned the site since about 1950 and has manufactured paints and coatings, using solvents, since 1953. Benjamin Moore & Co. purchased Technical Coatings as a wholly owned subsidiary in 1963. Toluene, xylenes, methyl ethyl ketone, diesel, gasoline and other solvents and chemicals were stored onsite in 14 underground storage tanks (USTs) until 1983.

3. Site investigations which began in 1982 showed that volatile organic chemicals/compounds (VOCs) had been released, with the highest chemical concentrations generally detected in soil and groundwater near the former UST locations on the west side of the manufacturing plant, and high specific concentrations in shallow soils detected immediately east of the manufacturing plant (refer to Figure 1).

   High levels of soil pollution have been found locally at depths to 49.5 feet below the surface. Analytical results of soil samples reportedly indicated up to 2,900 ppm (parts per million) xylenes, 1,000 ppm ethyl benzene, and 16 ppm benzene. Analyses of groundwater samples indicated 3,100 ppm methyl isobutyl ketone, 140 ppm toluene, and 620 ppm xylenes.

4. Soil and groundwater sampling results from the property downgradient of the Technical Coatings site (the CAMSI IV property across Walsh Avenue) reportedly indicated that VOCs and chemicals appear to have migrated offsite from Technical Coatings. For offsite soil, analytical

results indicated the presence of up to 5.8 ppm methyl isobutyl ketone; for offsite (downgradient) groundwater, analytical results indicated the presence of up to 14 ppm benzene.

5. Other chemicals detected in soil and groundwater samples include naphthalene, methyl cyclohexane, methyl ethyl ketone, 1,1,1-trichloroethane, 1,1-dichloroethane, and trichloroethene. Results of additional analyses of groundwater samples from offsite downgradient monitoring wells located on the CAMSI IV property indicated that some of these pollutants may have migrated from the Technical Coatings site.

6. The 14 USTs were removed from service (13 were excavated) and replaced with four new double-walled USTs; some polluted soil in the former tank locations was removed (1985).

7. A groundwater extraction and treatment system was installed in 1987 and is still in operation. An effectiveness evaluation of the extraction system indicated that the system was only partially capable of preventing offsite migration of the pollution plume. After this evaluation was made, the extraction system was augmented with the construction of two interceptor trenches. The dischargers state that recent monitoring data indicate that the extraction system is currently preventing offsite migration of the pollution plume. The effectiveness of the extraction system is evaluated annually by analyses of groundwater samples from wells immediately downgradient of Technical Coatings, and measurements of water levels.

   A major element of the extraction system consists of two deep interceptor trenches which collect polluted groundwater for extraction by submersible pumps. When these trenches were constructed, waste slurry, along with polluted groundwater, was deposited in a lined evaporation pond constructed on the property.

   Upon application to the RWQCB by the dischargers, an NPDES permit was issued to allow discharge of the treated pond effluent to the storm drain system. However, all the effluent evaporated over time, and none was discharged. This permit also allows discharge of treated extracted groundwater, should that become necessary. At the present time, the dischargers recirculate most of the treated groundwater throughout the manufacturing facility; a small amount of groundwater is used in paint manufacturing, and some is discharged to the sanitary sewer under a local permit. None is discharged to the surface. Some plant runoff is discharged to the surface as allowed by a generic-type permit issued by the State Water Board.

   The evaporation pond was closed under a plan proposed by the dischargers and accepted by the Regional Board, in the latter part of 1991.

8. Treatment of extracted groundwater is by means of bioremediation: a Detox biological treatment unit has been installed at the southwest corner of the property. This unit apparently does not remove all of the chemical pollutants in the groundwater, and at times is shut down because it is overwhelmed by high concentrations of pollutants in the influent.

9. The results of a soil venting pilot study, as reported by the dischargers, indicated that soil venting was a feasible alternative for remediating vadose zone soils. Soil venting was to be implemented by July 31, 1991. Prior to the implementation date the dischargers requested an 18-month delay. The Board agreed to a 12-month delay; the dischargers revised the soil venting plan, and requested a postponement from the new date of August 31, 1992, because of a high water table. The current proposal is to implement soil remediation by November 1, 1993.

10. Soil venting, as proposed, may not be a viable alternative for this site, and the dischargers may find it necessary to implement other remedial actions, such as installing and operating more extraction wells and/or trenches, dewatering a portion of the site and implementing the proposed soil venting program or a modified version thereof, some other technique, or a combination of various techniques.

11. Technical Coatings Company is a discharger because it owned and occupied the site when pollution was occurring. Benjamin Moore & Co. is a discharger because it became the parent company of Technical Coatings and obtained ownership of the company and site while pollution was occurring, and is the present owner of Technical Coatings and the site.

12. The Board's major concerns about this site are: (1) the pollution plume may have migrated offsite and may not be completely contained; (2) the Detox biological treatment unit may not be adequate for long-term groundwater remediation, especially if the dischargers are ever prohibited from discharging effluent to the sanitary sewer; (3) the dischargers have been unable to implement a soil remediation program; and (4) soil remediation (vapor extraction) proposed by the dischargers may not, by itself, be an effective remedy for this site.

13. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 11, 1991. The Basin Plan contains water quality objectives for South San Francisco Bay and contiguous surface waters and groundwater.

14. The existing and potential beneficial uses of the groundwater underlying and adjacent to the property include:

    a. Industrial process water supply.
    b. Industrial service supply.
    c. Municipal and domestic supply.
    d. Agricultural supply.

15. The dischargers have caused or permitted, and threaten to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.

16. This action is an Order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

17. The Board has notified the dischargers and interested agencies and persons of its intent under California Water Code Section 13304 to revise Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers shall cleanup and abate the discharges described in the above Findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of polluted soil or groundwater shall not create a nuisance as defined in Section 13050 (m) of the California Water Code.

2. The dischargers shall conduct further reporting, site investigation and monitoring activities as needed and as described in this Order. Results of such monitoring activities shall be submitted to the Board. Should monitoring results show evidence of plume migration, additional plume characterization may be required. Monitoring activities, including but not limited to, measuring groundwater levels and collecting groundwater samples for analyses, shall be conducted according to programs based on plans and/or modifications submitted to and found acceptable by the Executive Officer.

3. The cleanup standard for soils is 1 ppm total VOCs. Alternate cleanup goals may be proposed based on site specific data. If higher levels of VOCs are proposed, the dischargers must demonstrate that cleanup to 1 ppm total VOCs is infeasible, that the alternate levels will not threaten the quality of waters of the State, and that human health and the environment are protected. Final cleanup standards for soils must be acceptable to the Executive Officer.

4. Final cleanup standards for groundwater shall be background water quality if feasible, but shall not be greater than the DHS drinking water Maximum Contaminant Level (MCL) or Action Level (AL), whichever is more stringent. If an MCL or AL has not been established, the standard shall be established in accordance with the State Water Resources Control Board's Resolution No.

68-16, "Statement of Policy With Respect to Maintaining High Quality of Waters in California", and shall be based on the evaluation of cost, effectiveness and a risk assessment to determine affect on human health and the environment, and shall be approved by the Board. These standards shall have a goal of reducing mobility, toxicity, and volume of pollutants.

5. The dischargers shall optimize, with a goal of 100%, the reclamation or reuse of groundwater extracted as a result of cleanup activities. The dischargers shall not be found in violation of this Order if documented factors beyond the dischargers' control prevent the dischargers from attaining this goal, provided the dischargers have made a good faith effort to attain this goal.

6. Within 60 days of the Executive Officer's determination and actual notice to Benjamin Moore & Co. that Technical Coatings Company has failed to comply with the prohibitions, specifications, and/or provisions of this Order, Benjamin Moore & Co., as landowner, shall comply with the prohibitions, specifications, and/or provisions of this Order.

7. Pursuant to Section 13304 of the Water Code, the dischargers are hereby notified that the Regional Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Regional Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. Upon receipt of a billing statement for such costs, the discharger shall reimburse the Regional Board.

C. PROVISIONS

1. The dischargers shall perform all investigation and remedial work in accordance with requirements of this Order.

2. The dischargers shall submit to the Board acceptable monitoring program reports containing results of work performed according to a program prescribed by the Board's Executive Officer.

3. The dischargers shall comply with all Prohibitions and Specifications of this Order, in accordance with the following time schedule and tasks:

   a. TASK 1: SUBMIT UPDATED PROPOSAL TO REMEDIATE SOIL. The dischargers shall submit a technical report acceptable to the Executive Officer which proposes remediation of polluted soil. This proposal shall consider the feasibility of various alternatives for remediating soil, including but not limited to, soil removal, soil gas venting (vapor extraction) using sparging techniques as may be appropriate for this site, and the installation of additional groundwater extraction wells and/or trenches. The report shall include maps and cross-sections at appropriate scale and in appropriate detail, illustrating the extent of soil pollution and indicating where remediation is required.

      COMPLETION DATE: March 1, 1993

b. TASK 2: IMPLEMENTATION OF SOIL REMEDIATION. Submit a technical report acceptable to the Executive Officer documenting that a proposal to remediate soil, as found acceptable by the Executive Officer, has been implemented by the dischargers.

COMPLETION DATE: 60 days following notification from the Executive Officer to implement remediation proposed by the dischargers

c. TASK 3: EVALUATE REMEDIAL ACTIONS FOR SOIL. Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the soil remediation activities. Such an evaluation shall include, but need not be limited to, an estimation of the pounds of chemicals extracted and a presentation of chemical monitoring data.

COMPLETION DATE: 180 days following implementation of Task 2

d. TASK 4: PROPOSE FINAL CLEANUP OBJECTIVES AND ACTIONS. Submit a technical report acceptable to the Executive Officer that proposes final cleanup objectives and actions directed towards achieving the cleanup standards specified in this Order. This report shall contain the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.

COMPLETION DATE: July 1, 1994

e. TASK 5: COMPLETE IMPLEMENTATION OF FINAL CLEANUP ACTIONS. Submit a technical report acceptable to the Executive Officer documenting the implementation of final cleanup actions as proposed and accepted by the Executive Officer in accordance with Task 4 above.

COMPLETION DATE: December 1, 1994

f. TASK 6: SUBMIT STATUS REPORT. Submit a technical report acceptable to the Executive Officer containing the following: 1) results of any additional investigative work completed; 2) an evaluation of the effectiveness of implemented final cleanup measures; 3) additional recommended measures to achieve final cleanup objectives and goals if necessary; 4) comparison of previous expected costs with incurred costs and projected costs necessary to achieve cleanup objectives and goals; 5) the tasks and time schedule necessary to implement any additional final cleanup measures; and 6) recommended measures for reducing Board oversight. This report shall also describe the reuse of extracted groundwater, and evaluate and document the removal and/or cleanup of polluted soil. If safe drinking water levels (standards) have not been achieved through continued groundwater extraction and/or soil remediation, this report

shall also contain an evaluation addressing whether it is technically feasible to achieve drinking-water quality onsite, and if so, a proposal for procedures to do so.

COMPLETION DATE: December 1, 1995

4. The submittal of technical reports evaluating proposed interim and final cleanup measures will include a projection of the cost, effectiveness, benefits and impact on public health, welfare and environment of each alternative measure. A remedial investigation and feasibility study shall consider guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300); CERCLA guidance documents with reference to Remedial Investigations, Feasibility Studies and Removal Actions; and the State Water Resource Control Board's Resolution No. 68-16, "Statement of Policy With Respect to Maintaining High Quality of Waters in California".

5. Any proposal for the discharge of extracted groundwater included in a technical report required by this Order must initially consider the feasibility of reclamation or discharge to a publicly owned treatment works (POTW), as specified in Board Resolution No. 88-160. If it can be demonstrated that reclamation or discharge to a POTW is technically and economically infeasible, a proposal for discharge to surface water shall be considered. Such proposal for discharge to surface water shall include a completed application for an NPDES permit.

6. If the dischargers are delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the dischargers shall promptly notify the Executive Officer. In the event of such delays, the Board may consider modification of the task completion dates established in this Order.

7. The dischargers shall submit to the Board acceptable reports on compliance with the requirements of this Order, and acceptable activity monitoring reports that contain descriptions and results of work performed. These reports are to be submitted according to a program prescribed by the Board and described below.

   a. TWICE EACH YEAR (every six months) a technical report on soil and groundwater monitoring shall be submitted to the Board. The report shall cover the previous six-month period and shall be submitted within 45 days following the end of the reporting period. The initial report shall cover the period of July 1 through December 31, 1992 and shall be due by February 15, 1993. This report shall include, but need not be limited to, the following information:

      1) Results of annual water quality sampling analyses for all wells using EPA Method 8240 (open scan), and results of biannual (twice annual) water quality sampling analyses for wells T18A, T19B, T20A, T21B, T43A, and T44B using approved EPA methodology, and groundwater pollution plume maps based on these results.

2) Updated (quarterly) piezometric surface maps, based on the most recent water level measurements for all wells, and coordinated with the adjacent and nearby Felton Aluminum and CAMSI IV sites.

Current base map(s) showing the locations of all monitoring wells and extraction wells and trenches, and identifying associated structures, and adjacent and nearby property and structures.

3) Cummulative tabulations of volumes of groundwater extracted, reused, and/or discharged and pounds of chemicals removed, and results of chemical analyses of groundwater samples from extraction wells.

4) Cummulative tabulations of results of chemical analyses for all soil vapor extraction wells and pounds of chemicals removed, and soil pollution plume maps based on the results of soil vapor sampling analyses.

5) A cummulative tabulation of all well construction details, and quarterly water level measurements.

6) An evaluation of the effectiveness of the biological treatment unit in removing chemicals and recommendations for improving effectiveness.

7) An evaluation of actions taken to prevent pollution in site groundwater from migrating offsite.

8) A summary of all non-compliance events which occurred during the reporting period and what was done to bring the facility back into compliance.

b. ONCE EACH YEAR (annually) a technical report on the progress of compliance with all requirements of this Order shall be submitted to the Board, covering the period of the previous calendar year, and submitted by February 15. This report shall include, but need not be limited to, progress on site investigations and remedial actions, operation of interim and final remedial actions and/or systems, and the feasibility of meeting groundwater and soil cleanup standards. This report shall also include an evaluation of possible offsite migration of polluted groundwater from the Technical Coatings site and recommended actions to contain the plume onsite.

Each annual report shall include a description of the hydrogeological setting of the site accompanied by appropriate geologic maps and cross-sections. The annual report may be combined and submitted with the six-month report due by the same date.

8. All hydrogeological plans, specifications, reports and documents shall be signed by or stamped with the seal of a registered geologist or professional engineer, or a certified engineering geologist.

9. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain Quality Assurance/Quality Control Records for Board review.

10. The dischargers shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

11. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order shall be provided the following agencies:

    a. Santa Clara Valley Water District (Tom Iwamura)
    b. City of Santa Clara (Dave Parker)

12. The dischargers shall permit the Board or its authorized representative, in accordance with Section 13267 (c) of the California Water Code:

    a. Entry upon premises in which any pollution sources exist or may potentially exist, or in which any required records are kept, which are relevant to the Order.

    b. Access to copy any records required to be kept under the terms and conditions of the Order.

    c. Inspection of any monitoring equipment or methodology implemented in response to this Order.

    d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the dischargers.

13. The dischargers shall file a report on any changes in site occupancy and ownership associated with the facility described in this Order.

14. If any hazardous substance is discharged in or on any waters of the State, or discharged and deposited where it is, or probably will be discharged in or on any waters of the State, the dischargers shall report such discharge to this Board at (510) 286-1255 on weekdays during normal office hours (8:00 AM to 5:00 PM), and to the Office of Emergency Services at (800) 852-7550 during non-business hours. A written report shall be filed with the Board within five (5) working days and shall contain information relative to: the nature of waste or pollutant,

quantity involved, duration of incident, cause of spill, Spill Prevention, Control and Countermeasure Plan (SPCC) in effect, if any, estimated size of affected area, nature of effect, corrective measures that have been taken or planned, and a schedule of these activities, and persons/agencies notified.

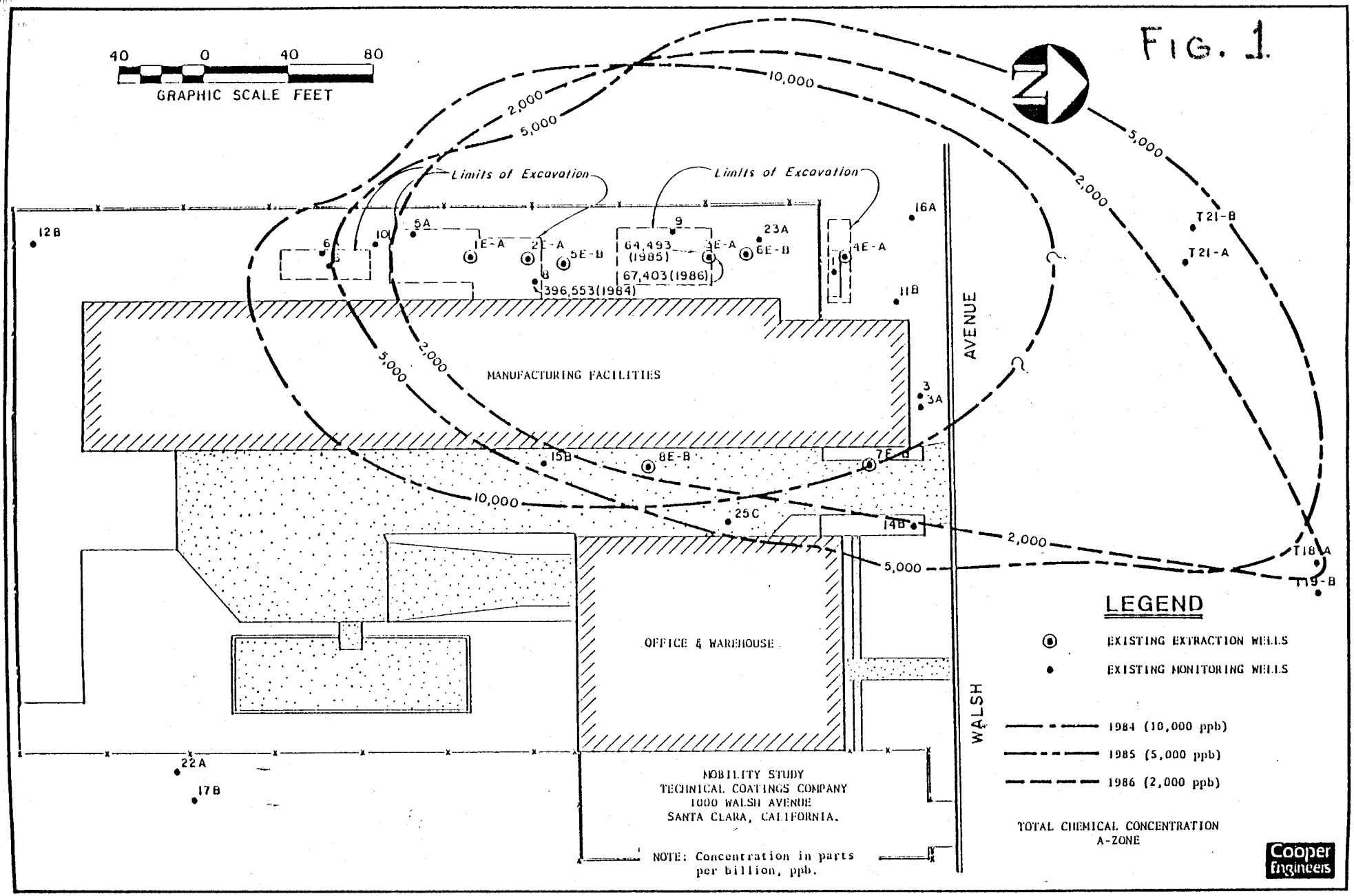
15. Existing Site Cleanup Requirements Orders No. 89-160 and 91-123 are hereby rescinded with adoption of this Order.

16. The Board will review this Order periodically and may revise the requirements when necessary.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 18, 1992.

Steven R. Ritchie
Executive Officer

FIG. 1.



Checked By _____ Date _____
Job Number 2,040-B Name Technical Coatings Company Location Santa Clara, California
By _____